ABSTRACT OF THE DISCLOSURE

PACKET NETWORK MONITORING DEVICE

A network diagnostic device is disclosed that digitally samples the voltages on the cabling of the network, but does so at a much higher rate and with greater resolution

5 then is required to minimally detect digital transmissions on the cabling. This sampling provides information on the analog characteristics of digital, noise, and interference signals on the network. Thus, network problems can be precisely diagnosed. The device includes a fast digitizer with a long memory and a system processor that statistically analyzes the signal events captured by the digitizer. The invention is also

10 capable of performing time domain reflectometry (TDR) analysis of a functioning network. This is accomplished by placing a TDR signal on the network surrounded by a transmission that the network devices will interpret as a broadcast diagnostic packet. This will cause the network nodes to ignore the transmission. The digitizer, however, is able to detect the networks response to the TDR signal. Methods for identifying

15 unknown network sources and Manchester decoding are also disclosed.